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22101 (US). RESHEF, Yaron; 6813 Breezewood Terrace,  
Rockville, MD 20852 (US).

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(74) Agents: CURTIN, Joseph, P. et al.; Banner & Witcoff,  
Ltd., 1001 G Street, N.W., Eleventh Floor, Washington, DC  
20001-4597 (US).

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(71) Applicant: SPACENET, INC. [US/US]; 1750 Old  
Meadow Road, McLean, VA 22102 (US).

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(72) Inventors: CHATTERJEE, Aditya, N.; 8908 Spring  
Berry Court, Montgomery Village, MD 20886 (US).  
JAGANNATHAN, Anand; 2268 Pimmit Run Lane  
#201, Falls Church, VA 22043 (US). BOWERS, Steven,  
R.; 1404 Valebrook Lane, Herndon, VA 20170 (US).  
RODRIGUES, Roberto, G.; 1802 Wilson Lane #104,  
McLean, VA 22102 (US). KADRICHU, Hanny, P.; 14148  
Saddle River Drive, North Potomac, MD 20878 (US).  
NELSON, Richard, C.; 1501 Wasp Lane, McLean, VA

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ning of each regular issue of the PCT Gazette.

(54) Title: SYSTEM AND METHOD FOR INTERNET PAGE ACCELERATION INCLUDING MULTICAST TRANSMISSIONS

(57) Abstract: A broadband communication system with improved latency is disclosed. The system employs distributed caching techniques to assemble data objects at locations proximate to a source to avoid latency over delayed links. The assembled data objects are then multicast to one or more remote terminals in response to a request for the objects, thus reducing unnecessary data flow across the satellite link.

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## INTERNATIONAL SEARCH REPORT

International Application No.  
PC/PUS 01/04679

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 H04B7/185 G06F17/30 H04L29/06

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G06F H04B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 99/16201 A (ZAK SAT GENERAL TRADING CO WLL ;EL RAFIE KHALID MONIR A (PH); SANA) 1 April 1999 (1999-04-01) page 19, line 18 - page 27, line 26 -----	1-60, 93-96
A	US 5 991 306 A (BURNS GREGORY ET AL) 23 November 1999 (1999-11-23) column 5, line 64 - column 7, line 11 column 11, line 49 - column 12, line 31; figures 2,6 -----	1-60, 93-96
A	US 5 987 233 A (HUMPHREY DOUGLAS EDWARD) 16 November 1999 (1999-11-16) claims 1-17; figures 1-4 -----	1-60, 93-96
A	WO 99/08429 A (TACHYON INC) 18 February 1999 (1999-02-18) claim 9; figures 1-8 -----	1-60, 93-96
-/-		

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

## \* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

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"Z" document member of the same patent family

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European Patent Office, P.B. 6818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel: (+31-70) 340-2040, Tx: 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Bischof, J-L

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## C. (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>CHEN H ET AL: "Wormhole caching with http push method for a satellite-based web content multicast and replication scheme" AT&amp;T SYSTEMS, March 1999 (1999-03), pages 1-12, XP002201410 Retrieved from the Internet: URL: <a href="http://citeseer.nj.nec.com/chen99wormhole.html">http://citeseer.nj.nec.com/chen99wormhole.html</a> [retrieved on 2002-06-06] the whole document</p> <p>-----</p>	<p>1-60, 93-96</p>

Form PCT/ISA/210 (continuation of second sheet) (January 2004)

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US 01/04679

## Box I Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of Item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-60, 93-96

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-60,93-96

A caching system and method for a satellite communication system.

The problem addressed is the rapid access of data in a satellite communication system with limitation of the duplication of memorized data.

The solution is the storing of part of the data in a cache with request from the cache to a host of the rest of the data on demand from a client.

A cache stores information data. A remote client is connected to the system through a satellite. The client requests a page of information. A portion of the page which is stored in the cache is transmitted to the remote client by the cache. A request is transmitted by the cache to a host station through the satellite communication system for information forming the part of the requested page which is not stored in the cache.

Independent claim 1 discloses the system to implement the solution; independent claim 31 discloses the method to implement the solution; independent claim 93 discloses the method to implement the solution in which the information pages transmitted are HTML files.

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2. claims: 61-92

A multicast system in which a server in a computer network allocates indexes to pages to be multicast.

The problem addressed is the identification of data to be multicast in a computer network.

The solution is the indexing of data pages.

Independent claims 61 and 71 disclose two embodiments of the system forming the solution; independent claims 77 and 87 disclose two embodiments of the method forming the solution.

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# INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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